Air Pollution Control
40 CFR Part 49 Tribal Minor New Source Review Permit to Construct
Technical Support Document
Proposed Permit #SMNSR-UO-001875-2016.001

Anadarko Uintah Midstream, LLC
Sage Grouse Compressor Station
Uintah and Ouray Indian Reservation
Uintah County, Utah

In accordance with the requirements of the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR part 49, this federal permit to construct is being issued under authority of the Clean Air Act (CAA). The EPA has prepared this technical support document describing the conditions of this permit and presents information that is germane to this permit action.

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I. Introduction

On November 8, 2016, the EPA received an application from Anadarko Uintah Midstream, LLC (Anadarko), requesting a synthetic minor permit for the Sage Grouse Compressor Station (Sage Grouse) in accordance with the requirements of the MNSR Permit Program.

This permit action will apply to an existing facility operating on the Uintah and Ouray Indian Reservation in Utah. The physical location is Latitude 39.90377N, Longitude -109.47078W, in Uintah County, Utah.

This permit does not authorize the construction of any new emission sources, or emission increases from existing units, nor does it otherwise authorize any other physical modifications to the facility or its operations. This permit is only intended to incorporate required and requested enforceable emission limits and operational restrictions from a March 27, 2008, federal Consent Decree (CD) between the United States of America (Plaintiff), and the State of Colorado, the Rocky Mountain Clean Air Action and the Natural Resources Defense Council (Plaintiff-Intervenors), and Kerr-McGee Corporation (Civil Action No. 07-CV-01034-EWN-KMT), and the November 8, 2016 synthetic MNSR application.

Anadarko has requested legally and practically enforceable requirements for the installation and operation of a catalytic control system and air-to-fuel ratio (AFR) controls on five (5) field gas-fired 4-stroke lean-burn (4SLB) reciprocating internal combustion engines (RICE) (used for field gas compression and power generation at the facility), including associated carbon monoxide (CO) control efficiency requirements, consistent with the CD. Anadarko also requested an enforceable requirement to install and operate only low- or no-bleed or instrument air-driven pneumatic controllers, consistent with the CD.

Upon compliance with the permit, the legally and practically enforceable reductions in emissions can be used when determining the applicability of other CAA requirements, such as the Prevention of Significant Deterioration (PSD) Permit Program at 40 CFR part 52 and the Title V Operating Permit Program at 40 CFR part 71 (Part 71).

II. Facility Description and History

Sage Grouse collects field gas from the surrounding field via the low pressure gas collection system and compresses the gas into an intermediate pressure pipeline. The field gas enters the compressor station through the inlet slug catcher where liquids are gravitationally separated from the stream. Condensate and produced water recovered is sent to the atmospheric storage tanks onsite until loaded into trucks and transported offsite. The field gas goes through two (2) stages of compression and passes through three (3) hydrogen sulfide (H_2S) gas to liquid scrubbers to remove H_2S from the gas stream before being discharged from the facility.

The emission units identified in Table 1 are currently installed and/or operating at the facility. The information provided in this table is for informational purposes only and is not intended to be viewed as enforceable restrictions or open for public comment. The units and control requirements identified here either existed prior to any pre-construction permitting requirements or were approved/required through the alternative methods as identified below. Table 2, Facility-wide Emissions, provides an accounting of enforceable controlled emissions in tons per year (tpy).

Table 1. Existing Emission Units

Unit Description	Controls	Original Preconstruction Approval Date &/or Emission Control Requirement Details
Three (3) 4SLB, field gas-fired RICE for gas compression, each with a maximum site rating of 1,340 hp*. [Unit IDs: SGG 1, SGG 2, and SGG 3]	Oxidation Catalyst	No pre-construction approval required for the installation of the engines. Installed prior to the promulgation of the MNSR Permit Program. Control requirements established for all engines in the March 27, 2008 Consent Decree Civil Action No. 07-CV-01034-EWN-KMT. Area source operation and maintenance required for all three (3) engines per applicability to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines at 40 CFR part 63, subpart ZZZZ (NESHAP ZZZZ).
Two (2) 4SLB, field gas-fired RICE for power generation, each with a maximum site rating of 637 hp. [Unit IDs: SGG GEN-1 and SGG GEN-2]	Oxidation Catalyst	No pre-construction approval required for the installation of the engines. Installed prior to the promulgation of the MNSR Permit Program. Control requirements established for both engines in the March 27, 2008 Consent Decree Civil Action No. 07-CV-01034-EWN-KMT. Area source operation and maintenance required for both engines per applicability to the NESHAP ZZZZ.
One (1) 4SLB, field gas-fired RICE for power generation, with a maximum site rating of 125 hp. [Unit ID: SGG GEN-3]	None	No pre-construction approval required for the installation of the engine. Installed prior to the promulgation of the MNSR Permit Program. Area source operation and maintenance required for the engine per applicability to the NESHAP ZZZZ. This engine is also subject to the requirements in the New Source Performance Standards (NSPS) for Reciprocating Internal Combustion Engines at 40 CFR part 60, subpart JJJJ.
Pneumatic controllers (low-bleed, no-bleed or instrument air-driven).	None	No pre-construction approval required for the installation of the controllers. Installed and converted to instrument air prior to the promulgation of the MNSR Permit Program. Low- or no-bleed and instrument air conversion requirements established in the March 27, 2008 Consent Decree Civil Action No. 07-CV-01034-EWN-KMT.
One (1) 0.25 MMBtu/hr heater.	None	No pre-construction approval required for the installation of the heater. Installed prior to the promulgation of the MNSR Permit Program.
Three (3) 400 bbl* each atmospheric condensate / produced water storage tanks.	None	No pre-construction approval required for the installation of the tanks. Installed prior to the promulgation of the MNSR Permit Program.
Facility Fugitives.	None	No pre-construction approval required for the construction of the facility. Commenced prior to the promulgation of the MNSR Permit Program.

Unit Description	Controls	Original Preconstruction Approval Date &/or Emission Control Requirement Details
Tank Truck Loading.	None	No pre-construction approval required for the construction of the facility. Commenced prior to the promulgation of the MNSR Permit Program.

* hp = horsepower; bbl = barrel; MMBtu/hr = million British thermal units per hour.

Table 2. Facility-wide Emissions

Pollutant	Controlled Potential Emissions (tpy)
PM	0.0
PM_{10}	0.0
$PM_{2.5}$	0.0
SO_2	NA
NO_X	84.4
CO	24.9
VOC	22.8
Greenhouse Gases	
CO_2e (Total)	**23,209.5**
Hazardous Air Pollutants (HAP)	
Acetaldehyde	1.5
Acrolein	0.9
Benzene	0.1
Ethyl-Benzene	0.0
Toluene	0.0
n-Hexane	0.6
Xylene	0.0
Formaldehyde	3.6
2,2,4-Trimethylpentane	NA
Cyclohexane	NA
Total HAP**	**6.7**

PM – Particulate Matter
PM_{10} – Particulate Matter less than 10 microns in size
$PM_{2.5}$ – Particulate Matter less than 2.5 microns in size
SO_2 – Sulfur Dioxide
NO_X – Nitrogen Oxides
CO – Carbon Monoxide
VOC – Volatile Organic Compounds
CO_2 – Carbon dioxide
CH_4 – Methane
N_2O – Nitrous oxide
HFCs – Hydrofluorocarbons
PFCs – Perfluorocarbons
SF_6 – Sulfur hexafluoride
CO_2e – Equivalent CO_2. A measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP)

HFCs, PFCs, and SF_6 emissions are not created during oil and natural gas production operations.

NA – Not Available

*BTEX = benzene, toluene, ethylbenzene and xylenes.

**Total HAP is inclusive of but not limited to the individual HAP listed above.

III. Proposed Synthetic Minor Permit Action

A. 4SLB Field Gas-Fired Compressor Engines and Controls

Sage Grouse operates five (5) field gas-fired 4SLB RICE and the primary form of emission control for field gas-fired lean-burn RICE is catalytic control systems, most commonly systems that use oxidation catalysts. Oxidation catalyst control systems are effective for control of CO, VOC and formaldehyde. These catalysts do not typically control NOx emissions. However, lean-burn engines are designed to operate with more dilute field gas streams (a higher air-to-fuel ratio) than rich-burn engines. Because they operate on more dilute field gas streams, lean-burn engines also operate at lower combustion temperatures producing less NO_X emissions than rich-

burn engines. Sage Grouse also operates a 125 hp 4SLB generator engine that has been certified to meet the emission requirements in NSPS JJJJ.

The CD contains requirements to control five (5) of the six (6) engines using oxidation catalyst control systems capable of 93% CO control efficiency when operating at 90% load or higher. In addition to the conditions proposed in this MNSR permit, the engines are subject to operation and maintenance requirements for area sources under NESHAP ZZZZ. Anadarko is requesting to incorporate the engine requirements from the CD into this MNSR permit to provide legal and practical enforceability after the CD is terminated. Engine SGG-3 is not subject to the requirements of the CD and subject to the requirements under NSPS JJJJ; therefore, Anadarko is not requesting any requirements for engine SGG-3 in this MNSR permit.

Based on our review of Anadarko's permit application, we are proposing the construction, operation, control, testing, recordkeeping and reporting requirements in Table 3 for the five (5) engines, that are consistent with the requirements in the CD.

Table 3. Proposed Engine Construction, Operation, Emissions, Testing, Monitoring, Recordkeeping and Reporting Requirements

Type	**Proposed Requirement**
Construction, Control and Operation	Install, continuously operate and maintain a catalytic control system on each engine capable of reducing emissions of CO by at least 93.0% when the engine is operating at 90% load or higher. Follow engine and control manufacturer recommended maintenance schedules and procedures or equivalent procedures developed by the vendor or Permittee, to ensure optimum engine and control performance such that each engine meets the CO control efficiency requirement.
Performance Testing	Initial performance testing for compliance with the CO control efficiency within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial startup, including initial startup for engines that are rebuilt or replaced. Semiannual subsequent performance testing. Testing may be reduced to an annual basis after two consecutive passing tests. Performance tests shall be conducted using a portable analyzer to measure oxygen (O_2) and CO according to Carbon Monoxide Control Efficiency Portable Analyzer Monitoring Protocol (included as an

	appendix to the proposed MNSR permit, copied from Appendix F of the CD).
Recordkeeping	Keep records of: all manufacturer and/or vendor specifications for each engine, catalytic control system and portable analyzer; all calibration and maintenance conducted for each engine, catalytic control system and portable analyzer; all required performance tests; all engine rebuilds and replacements; and all deviations of permit conditions (including corrective actions and timeframe for return to compliance).
Reporting	Submit all initial performance test reports to the EPA within 60 days of completing the test. Include a summary of all maintenance conducted, corrective actions, subsequent semi-annual testing and all deviations from permit conditions (including corrective actions and timeframe for return to compliance) in each required annual report to the EPA.

These proposed CO control efficiency and operational requirements will result in a facility-wide PTE of 24.9 tpy for CO emissions. The potential controlled emissions are based on the engines operating a maximum of 8,760 hours in a year and at the specified maximum horsepower ratings and accounting for catalytic control system manufacturer guaranteed CO control efficiencies of 93%.

B. Pneumatic Controllers

The CD contains a requirement that all pneumatic controllers be operated using instrument air or low-bleed controllers. Therefore, we are proposing such a condition in the permit.

IV. Air Quality Review

The MNSR regulations at 40 CFR 49.154(d) require that an Air Quality Impact Assessment (AQIA) modeling analysis be performed if there is reason to be concerned that new construction would cause or contribute to a National Ambient Air Quality Standard (NAAQS) or PSD increment violation. If an AQIA reveals that the proposed construction could cause or contribute to a NAAQS or PSD increment violation, such impacts must be addressed before a pre-construction permit can be issued.

The emissions at this existing facility will not be increasing due to this permit action and the emissions will continue to be well controlled at all times. In addition, this permit action does not authorize the construction of any new emission sources, or emission increases from existing units, nor does it otherwise authorize any other physical modifications to the facility or its operations and the substantive requirements of the CD (emission controls and reductions) have already been fulfilled at this facility. In

short, this action will have no adverse air quality impacts; therefore, we have determined that an AQIA modeling analysis is not required for this action.

V. Tribal Consultations and Communications

We offer tribal government leaders an opportunity to consult on all major and certain synthetic MNSR permit actions. This synthetic MNSR permit action incorporates existing requirements from the March 27, 2008 Consent Decree Civil Action No. 07-CV-01034-EWN-KMT and does not authorize any increase in emissions or new construction. Therefore, we did not offer the Ute Indian Tribe the opportunity to consult on this action. However, the Ute Tribe may request consultation at any time. To date the Ute Indian Tribe has not requested consultation on this permit action.

All minor source applications (synthetic minor, minor modification to an existing facility, new true minor and general permit) are submitted to both the tribe and the EPA per the application instructions (see https://www.epa.gov/caa-permitting/tribal-nsr-permits-region-8). The tribe has 10 business days from the receipt of the application to communicate to the EPA any preliminary questions and comments on the application. In the event an AQIA is triggered, we email a copy of that document to the tribe within 5 business days from the date that we receive it.

Additionally, we notify the tribe of the public comment period for the proposed permit and provide copies of the notice of public comment opportunity to post in various locations of their choosing on the Reservation. We also notify the tribe of the issuance of the final permit.

VI. Environmental Justice

On February 11, 1994, the President issued Executive Order 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The Executive Order calls on each federal agency to make environmental justice a part of its mission by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations."

The EPA defines "Environmental Justice" to include meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and polices. The EPA's goal is to address the needs of overburdened populations or communities to participate in the permitting process. *Overburdened* is used to describe the minority, low-income, tribal and indigenous populations or communities in the United States that potentially experience disproportionate environmental harms and risks due to exposures or cumulative impacts or greater vulnerability to environmental hazards.

This discussion describes our assessment of the potential environmental impacts to potentially overburdened communities in connection with issuing this permit in Uintah County, Utah, within the exterior boundaries of the Uintah and Ouray Indian Reservation, and describes our efforts at meaningful public involvement in the permit issuance process.

A. Environmental Impacts to Potentially Overburdened Communities

This permit action would not authorize the construction of any new air emission sources, or air emission increases from existing units, nor would it otherwise authorize any other physical modifications to the associated facility or its operations. The air emissions at the existing facility

will not increase due to the associated action and the emissions will continue to be well controlled at all times. This action will have no adverse air quality impacts.

Furthermore, the permit will contain a provision stating, "*The permitted source shall not cause or contribute to a National Ambient Air Quality Standard violation or a PSD increment violation.*" Noncompliance with this permit provision is a violation of the permit and is grounds for enforcement action and for permit termination or revocation. As a result, we conclude that issuance of the aforementioned permit will not have disproportionately high or adverse human health effects on any communities in the vicinity of the Uintah and Ouray Indian Reservation.

B. Enhanced Public Participation

Given the presence of potentially overburdened communities in the vicinity of the facility, we are providing an enhanced public participation process for this permit.

1. Interested parties can subscribe to the EPA email list that notifies them of public comment opportunities on the Uintah and Ouray Indian Reservation for proposed air pollution control permits via email at https://www.epa.gov/caa-permitting/caa-permit-public-comment-opportunities-region-8.

2. All minor source applications (synthetic minor, modification to an existing facility, new true minor or general permit) are submitted to both the tribe and the EPA per the application instructions (see https://www.epa.gov/caa-permitting/tribal-nsr-permits-region-8).

3. We ask that the tribe communicate to the EPA any preliminary questions and comments on the application within 10 business days of receiving it.

4. In the event an AQIA is triggered, we email a copy of that document to the tribe within 5 business days from the date we receive it.

5. We notify the tribe of the public comment period for the proposed permit and provide copies of the notice of public comment opportunity to post in various locations of their choosing on the Reservation. We also notify the tribe of the issuance of the final permit.

6. We offer tribal government leaders an opportunity to consult on all major and certain synthetic MNSR permit actions. This synthetic MNSR permit action incorporates existing requirements from the March 27, 2008 Consent Decree Civil Action No. 07-CV-01034-EWN-KMT and does not authorize any increase in emissions or new construction. Therefore, we did not offer the Ute Tribe the opportunity to consult on this action. However, the Ute Indian Tribe may request consultation at any time.

VII. Authority

Requirements under 40 CFR part 49 to obtain a permit apply to new and modified minor stationary sources, and minor modifications at existing major stationary sources ("major" as defined in 40 CFR 52.21). In addition, the MNSR Permit Program provides a mechanism for an otherwise major stationary source to voluntarily accept restrictions on its potential to emit to become a synthetic minor source. We are charged with direct implementation of these provisions where there is no approved

Tribal implementation plan for implementation of the MNSR regulations. Pursuant to section 301(d)(4) of the CAA (42 U.S.C. Section 7601(d)), we are authorized to implement the MNSR regulations at 40 CFR part 49 in Indian country. The Sage Grouse Compressor Station is located on Indian country lands within the exterior boundaries of the Uintah and Ouray Indian Reservation in Utah. The exact location is Latitude 39.90377N, Longitude -109.47078W, in Uintah County, Utah.

VIII. Public Notice and Comment, Hearing and Appeals

A. Public Comment Period

In accordance with 40 CFR 49.157, we must provide public notice and a 30-day public comment period to ensure that the affected community and the general public have reasonable access to the application and proposed permit information. The application, the proposed permit, this technical support document and all supporting materials for the proposed permit are available at:

Ute Indian Tribe
Energy and Minerals Department
P.O. Box 70
988 South 7500 East, Annex Building
Fort Duchesne, Utah 84026
Contact: Minnie Grant, Air Coordinator, 435-725-4900 or minnieg@utetribe.com

and

U.S. EPA
Region 8 Air Program Office
1595 Wynkoop Street (8P-AR)
Denver, Colorado 80202-1129
Contact: Eric Wortman, Environmental Scientist, 617-918-1624 or wortman.eric@epa.gov

All documents are available for review at our office Monday through Friday from 8:00 a.m. to 4:00 p.m. (excluding federal holidays). Additionally, the proposed permit and technical support document can be reviewed on our website at: https://www.epa.gov/caa-permitting/caa-permit-public-comment-opportunities-region-8.

Any person may submit written comments on the proposed permit and may request a public hearing during the public comment period. These comments must raise any reasonably ascertainable issues with supporting arguments by the close of the public comment period (including any public hearing). Comments may be sent to the EPA address above, or sent via an email to r8airpermitting@epa.gov, with the topic "Comments on SMNSR Permit for the Sage Grouse Compressor Station."

B. Public Hearing

A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised at the hearing. We will hold a hearing whenever there is, on the basis of requests, a significant degree of public interest in a proposed permit. We may also hold a public hearing at our discretion whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.

C. Final Permit Action

In accordance with 40 CFR 49.159, a final permit becomes effective 30 days after permit issuance, unless: (1) a later effective date is specified in the permit; (2) appeal of the final permit is made as detailed in the next section; or (3) we may make the permit effective immediately upon issuance if no comments resulted in a change or denial of the proposed permit. We will send notice of the final permit action to any individual who commented on the proposed permit during the public comment period. In addition, the source will be added to a list of final permit actions which is posted on our website at: https://www.epa.gov/caa-permitting/caa-permits-issued-epa-region-8. Anyone may request a copy of the final permit at any time by contacting the Tribal Air Permit Program at (800) 227–8917 or sending an email to r8airpermitting@epa.gov.

D. Appeals to the Environmental Appeals Board

In accordance with 40 CFR 49.159, within 30 days after a final permit decision has been issued, any person who filed comments on the proposed permit or participated in the public hearing may petition the Environmental Appeals Board (EAB) to review any condition of the permit decision. The 30-day period within which a person may request review under this section begins when we have fulfilled the notice requirements for the final permit decision. Motions to reconsider a final order by the EAB must be filed within 10 days after service of the final order. A petition to the EAB is under section 307(b) of the CAA, a prerequisite to seeking judicial review of the final agency action. For purposes of judicial review, final agency action occurs when we issue or deny a final permit and agency review procedures are exhausted.